

iChip™

# **Config Utility User's Manual**

**Version 2.1.14**

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1.0	November 2001	Original Release for firmware Ix701xxx or higher, Boot Block BBIC0701 or higher. Author Izak Shoshana
2.1.14	December 2001	Added support for URL retrieve, MIME attachment Email send, Email retrieve, script tool and communication platform change. To be used with firmware Ix701xxx or higher, Boot Block BBIC0701 or higher. Author Izak Shoshana

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## 1. Overview

This User Manual is intended to familiarize prospective customers of Connect One's products (iChip, iLAN, iModem, II-EVB-100) with the functionality of the iChip Config utility.

Connect One's iChip™ Internet Controller™ is an Internet peripheral chip that offloads Internet connectivity tasks from a host processor. The host processor communicates with iChip via Connect One's high-level AT+i™ command set. The AT+i API requires writing just a few lines of code on the host processor to implement Internet connectivity.

The iChip Config utility, combined with iChip, iModem, iLAN or II-EVB-100 enables quick and full iChip configuration, serial-based and Web-based updating of firmware, and packaging of a Website and parameters file. This functionality is achieved from any device, machine, or system.

## 2. Setup

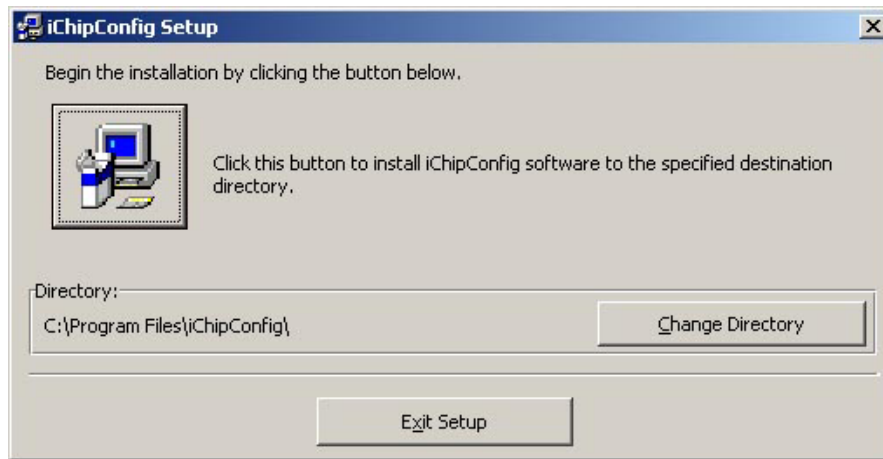
iChip Config installation is quick and easy. The program is suitable for Win98 and Win 2000 OS with at least one free COM port.

From the Release CD or after downloading the iChip Config installation ZIP file, extract the *iChipConfigINST.zip* file into a temp directory and run *SETUP.EXE*.

The following screen should appear:

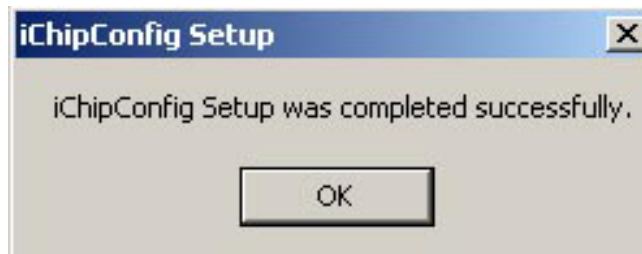


Hit *OK* to continue the installation or *Exit Setup* to leave the setup.



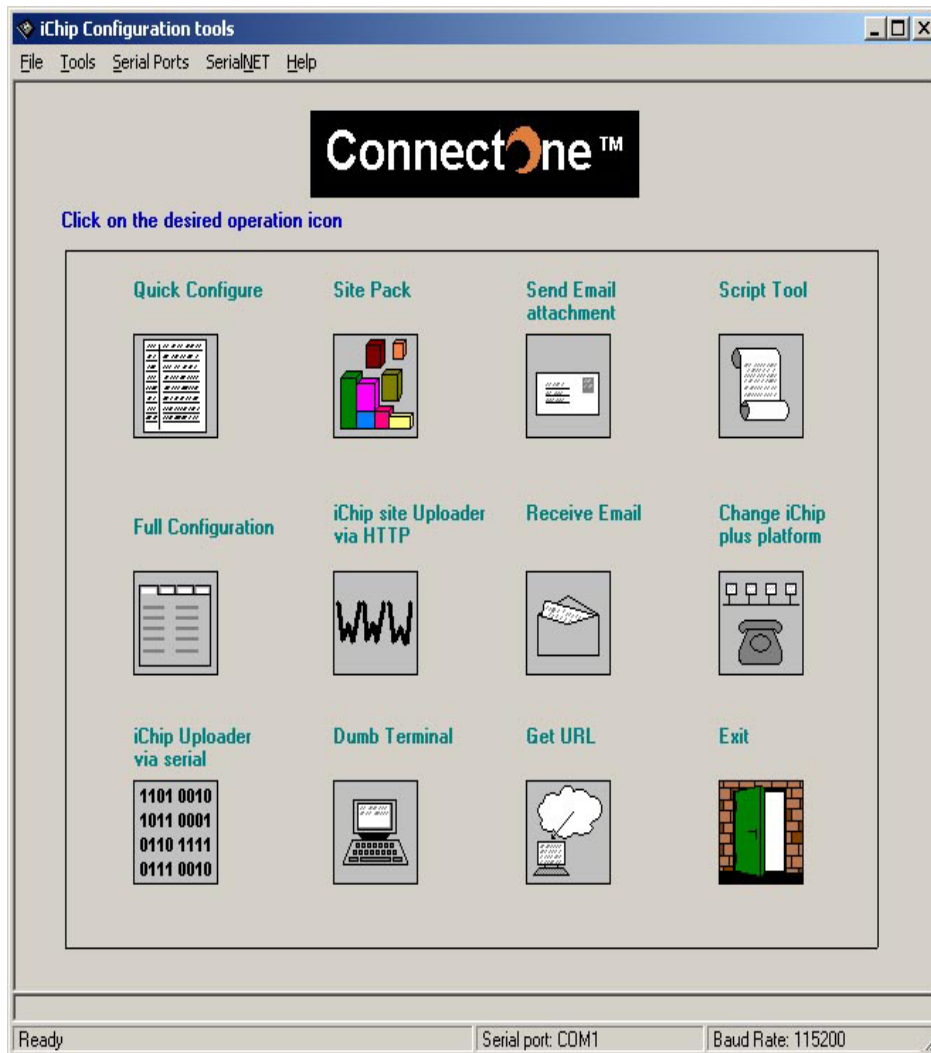
Either change the directory using the *Change Directory* button or click the  button to continue the installation.

The iChip Config installation wizard reports a successful completion of the Setup:



### 3. Getting Started

To start the iChip Config Utility, click on *Start* → *Programs* → *ConnectOne* → *iChipConfig*. The following screen will appear:



Connect the iModem, iLAN, or II-EVB-100 to the PC's RS232 COM Port and turn on the device's power.

When clicking on any of the icons (except *Exit*) iChip Config will attempt to locate the iChip on one of the PC's COM ports at the default baud rate: 38400. If the iChip is not located the following dialog will appear.



This dialog will also be displayed when choosing *Serial Ports* from the menu bar.

On the left side of the Combo Box, choose the serial COM port to which iChip is attached. On the right side of the Combo Box, choose the exact baud rate used by iChip, or select *Scan* if you don't know the baud rate.

If *Scan* was chosen, the iChip Config utility will run through the different baud rates until the right one is found.



**NOTE:** if the iChip Config utility still fails to find iChip, make sure that an open application like (Palm HotSync) is not holding the port, or switch to a different COM port and try *Scan* again. After iChip Config has found the baud rate, you can easily change the baud by simply loading the *Serial Settings* screen and choosing the desired baud rate.



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## 4. Features

The Main Screen enables access to the entire iChip Config utility capabilities. Only one option can be chosen at a time. The options available from the main screen are:

- Quick Configure
- Full Configuration
- Remote Firmware Update (iChip Uploader via Serial and HTTP)
- Web Parameters Update (Site Pack)
- Dumb Terminal
- SerialNET Mode selection
- RPF File Manipulation
- Send email attachment
- Receive emails
- Script Tool
- Change iChip Plus communication platform
- Get URL
- Serial COM Port and Baud Rate Selection

Each of these options is explained below.

### 4.1 Quick Configure

The *Quick Configure* screen allows the user to configure only the essential AT+i parameters required for iModem, iLAN or II-EVB-100 to be able to send and retrieve an email.

Usually this is a good way to make sure that the iChip is operational on the LAN or that it is configured correctly to work with your ISP.

Once all the relevant parameters are applied, specific parameters for other tasks, like socket manipulation, Web serving, etc., can be done with no need to reconfigure Connection, Servers or ISP-related parameters.

When *Quick Configure* is chosen for the II-EVB-100 or iChip Plus, the following screen appears:

The screenshot shows the 'iChip plus Quick Configure' window. At the top is the 'ConnectOne™' logo. The window is divided into several sections for configuration:

- iChip parameters:** Includes fields for 'ISP Telephone number' (35), 'User name' (izaks), 'Password' (masked with xxxxxx), and a checked 'Blind dial' checkbox.
- iChip LAN parameters:** Includes fields for 'Default IP address' (0.0.0.0), 'Assigned IP address' (139.187.235.244), 'Sub Net' (255.255.0.0), 'MAC address' (000394060452), and 'Gateway' (139.187.235.51). There are also checkboxes for 'Use DHCP' and 'Use IP Finder', both of which are unchecked.
- General parameters:** Includes fields for 'SMTP Server' (mail.inter.net.il), 'Destination email address' (izaks@connectone.com), 'Return email address' (iChip@connectone.com), 'POP3 Server' (mail.inter.net.il), 'Mailbox' (izaks), 'Mailbox password' (masked with xxxxxx), 'DNS1' (139.187.235.51), and 'DNS2' (139.187.235.51).

At the bottom of the main configuration area, it displays 'iChip type : iChip plus' and 'Serial num : 00000008' on the left, and 'Firmware ver : ID701B05 (13.12.2001)' and 'Boot block : 0701' on the right. There are 'Save' and 'Close' buttons at the bottom center.

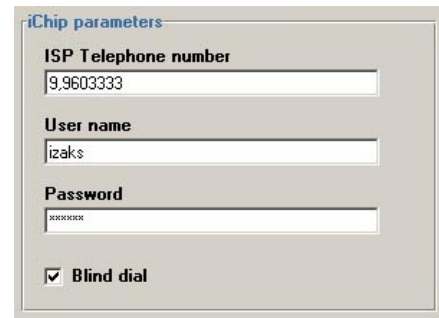
The status bar at the very bottom shows 'Ready', 'Serial port: COM1', and 'Baud Rate: 115200'.

---

#### 4.1.1. iChip Parameters

Fill in the ISP telephone number, including external line digit, area code if needed, etc., and the ISP user name and password.

When using iLAN, the *Quick Configure* screen includes the following fields:



The 'iChip parameters' window contains the following fields and options:

- ISP Telephone number:** A text input field containing '9,9603333'.
- User name:** A text input field containing 'izaks'.
- Password:** A text input field containing 'XXXXXX'.
- Blind dial:** A checked checkbox.

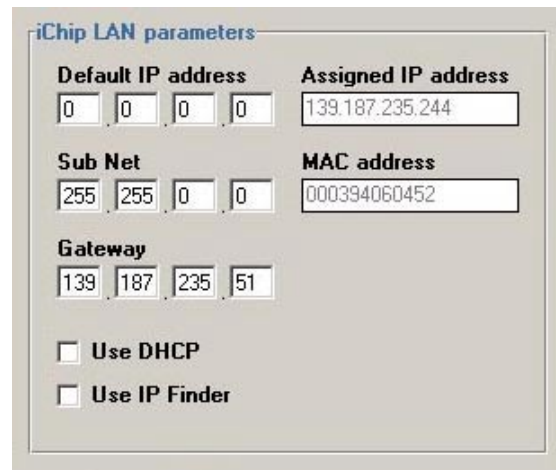
#### 4.1.2. iChip LAN Parameters

iChip LAN supports DHCP and BootP servers, so if a DHCP server is available on the LAN, check *Use DHCP*. Once the Ethernet cable is connected, iChip will receive the IP address, Subnet and Gateway directly from the DHCP server.

If there is no DHCP server on the LAN, ask your System Administrator for a free IP address, Subnet and the default Internet gateway IP address.

iLAN also supports plug and play operation.

If you wish to configure iLAN using the IP Finder utility via the Web, mark the *Use IP Finder* checkbox and revert to the IP finder utility for additional information.



The 'iChip LAN parameters' window contains the following fields and options:

- Default IP address:** Four numeric input fields showing '0', '0', '0', '0'.
- Assigned IP address:** A text input field containing '139.187.235.244'.
- Sub Net:** Four numeric input fields showing '255', '255', '0', '0'.
- MAC address:** A text input field containing '000394060452'.
- Gateway:** Four numeric input fields showing '139', '187', '235', '51'.
- Use DHCP:** An unchecked checkbox.
- Use IP Finder:** An unchecked checkbox.

---

### 4.1.3. General Parameters

In order for iChip to send and receive email, mail servers and mailbox parameters must be configured.

The *SMTP Server* is the outgoing mail server address as specified by your ISP. The POP3 Server is the incoming mail server address as specified by your ISP.

The *Return email address* is the email address that you choose to assign for email retrievals.

The *Mailbox* and *Mailbox password* are the specified user name and password of the email client.

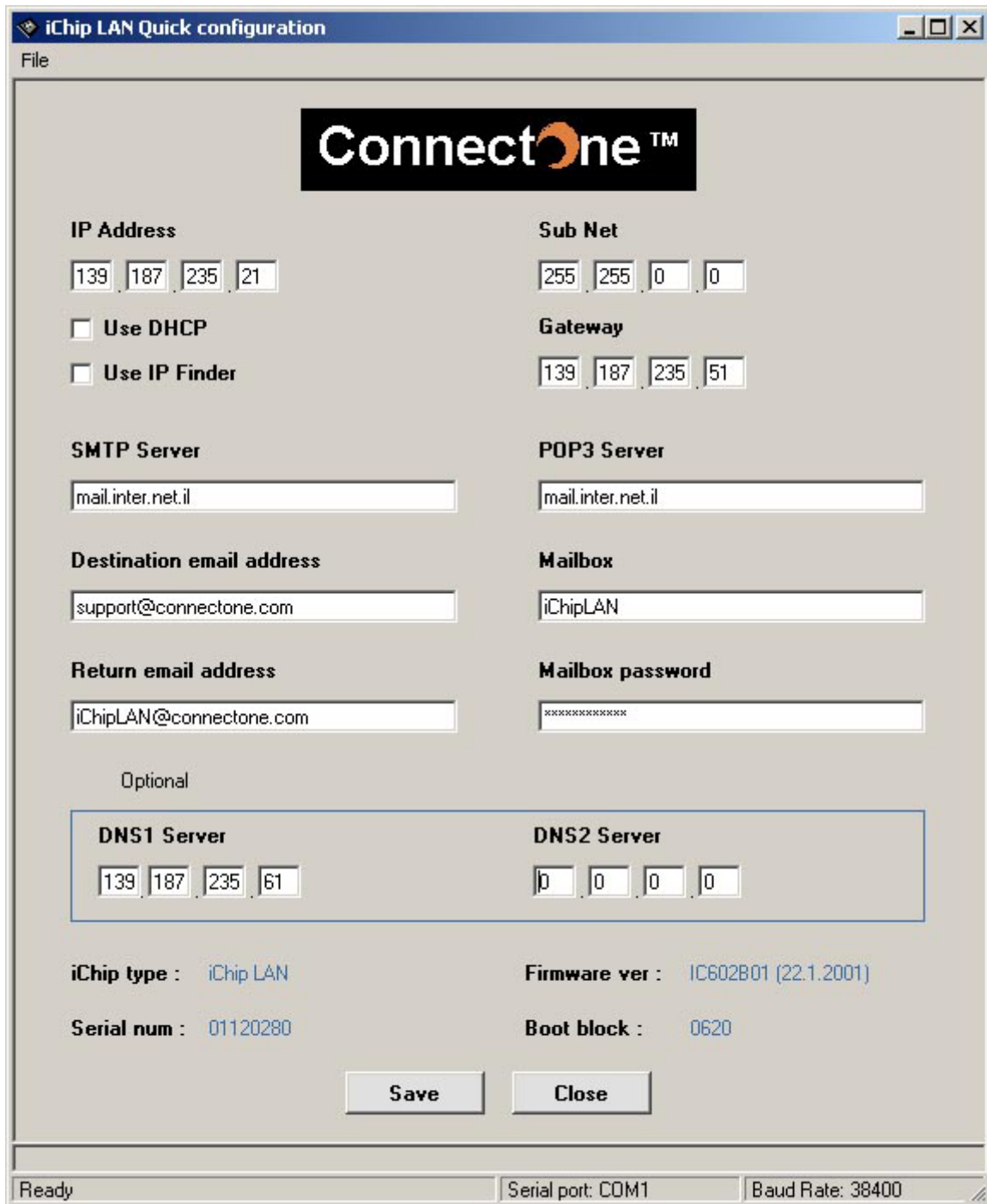
Some ISPs require the *DNS* address to resolve the logical mail server name into an IP address. If your ISP assigns a DNS address, there is no need enter any values. Just leave them at 0.0.0.0.

**NOTE:** These parameters are the minimum required to send and receive email. Additional parameters for mail configuration and manipulation are available in the Full Configuration dialog.

The screenshot shows a window titled "General parameters" with a light gray background. It contains several labeled input fields and two sets of numeric input boxes. The fields are: "SMTP Server" with the value "mail.inter.net.il", "Destination email address" with "izaks@connectone.com", "Return email address" with "izaks@inter.net.il", "POP3 Server" with "mail.inter.net.il", "Mailbox" with "izaks", and "Mailbox password" with a masked password "XXXXXXXX". Below these are two rows of four numeric input boxes each, labeled "DNS1" and "DNS2". The "DNS1" row contains the values 139, 187, 235, and 51. The "DNS2" row contains four zeros.

General parameters					
<b>SMTP Server</b>					
mail.inter.net.il					
<b>Destination email address</b>					
izaks@connectone.com					
<b>Return email address</b>					
izaks@inter.net.il					
<b>POP3 Server</b>					
mail.inter.net.il					
<b>Mailbox</b>					
izaks					
<b>Mailbox password</b>					
XXXXXXXX					
<b>DNS1</b>					
139	187	235	51		
<b>DNS2</b>					
0	0	0	0		

When using iLAN, the *Quick Configure* screen includes the following fields:



The image shows a screenshot of the 'iChip LAN Quick configuration' window. The window has a title bar with the text 'iChip LAN Quick configuration' and standard window controls. Below the title bar is a menu bar with 'File'. The main area features the 'ConnectOne™' logo at the top. The configuration fields are organized into two columns. The left column includes 'IP Address' (139, 187, 235, 21), 'Sub Net' (255, 255, 0, 0), 'Gateway' (139, 187, 235, 51), 'SMTP Server' (mail.inter.net.il), 'Destination email address' (support@connectone.com), 'Return email address' (iChipLAN@connectone.com), and 'DNS1 Server' (139, 187, 235, 61). The right column includes 'POP3 Server' (mail.inter.net.il), 'Mailbox' (iChipLAN), 'Mailbox password' (XXXXXXXXXX), and 'DNS2 Server' (0, 0, 0, 0). There are checkboxes for 'Use DHCP' and 'Use IP Finder'. At the bottom, there are 'Save' and 'Close' buttons. The status bar at the very bottom shows 'Ready', 'Serial port: COM1', and 'Baud Rate: 38400'.

**iChip LAN Quick configuration**

File

**ConnectOne™**

**IP Address**  
139 187 235 21

☐ Use DHCP

☐ Use IP Finder

**Sub Net**  
255 255 0 0

**Gateway**  
139 187 235 51

**SMTP Server**  
mail.inter.net.il

**POP3 Server**  
mail.inter.net.il

**Destination email address**  
support@connectone.com

**Mailbox**  
iChipLAN

**Return email address**  
iChipLAN@connectone.com

**Mailbox password**  
XXXXXXXXXX

Optional

**DNS1 Server**  
139 187 235 61

**DNS2 Server**  
0 0 0 0

**iChip type :** iChip LAN

**Firmware ver :** IC602B01 (22.1.2001)

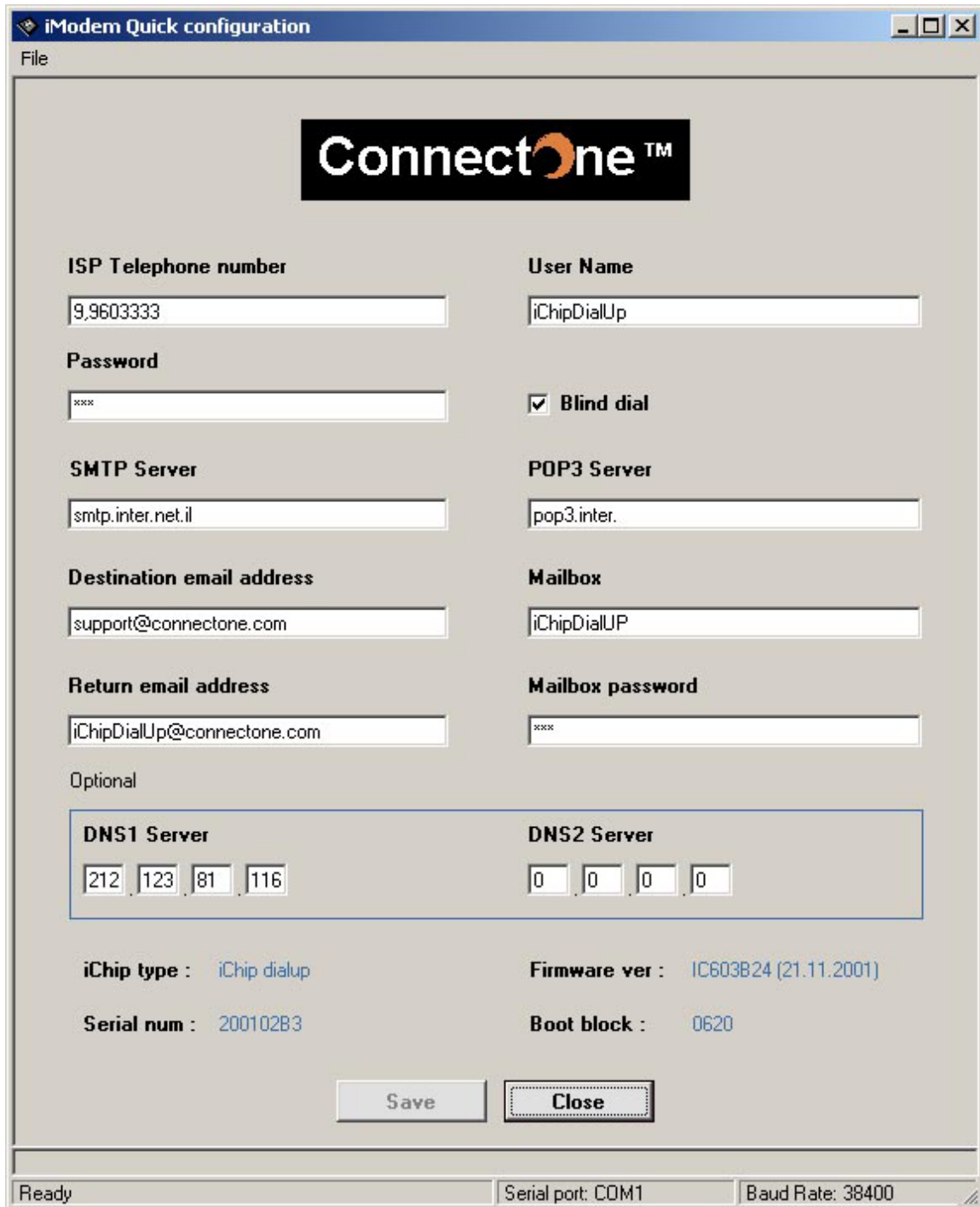
**Serial num :** 01120280

**Boot block :** 0620

**Save** **Close**

Ready Serial port: COM1 Baud Rate: 38400

When using iModem, the *Quick Configure* screen includes the following fields:



The image shows a screenshot of the 'iModem Quick configuration' window. The window has a title bar with the text 'iModem Quick configuration' and standard window controls. Below the title bar is a menu bar with 'File'. The main area features the 'ConnectOne™' logo at the top. The configuration fields are organized into two columns. The left column includes 'ISP Telephone number' (9,9603333), 'Password' (masked with 'xxx'), 'SMTP Server' (smtp.inter.net.il), 'Destination email address' (support@connectone.com), and 'Return email address' (iChipDialUp@connectone.com). The right column includes 'User Name' (iChipDialUp), a checked 'Blind dial' checkbox, 'POP3 Server' (pop3.inter.), 'Mailbox' (iChipDialUP), and 'Mailbox password' (masked with 'xxx'). Below these is an 'Optional' section containing 'DNS1 Server' (212, 123, 81, 116) and 'DNS2 Server' (0, 0, 0, 0). At the bottom, there are status fields: 'iChip type : iChip dialup', 'Serial num : 200102B3', 'Firmware ver : IC603B24 (21.11.2001)', and 'Boot block : 0620'. Two buttons, 'Save' and 'Close', are located at the bottom center. A status bar at the very bottom shows 'Ready', 'Serial port: COM1', and 'Baud Rate: 38400'.

**iModem Quick configuration**

File

**ConnectOne™**

**ISP Telephone number**  
9,9603333

**User Name**  
iChipDialUp

**Password**  
xxx

☒ **Blind dial**

**SMTP Server**  
smtp.inter.net.il

**POP3 Server**  
pop3.inter.

**Destination email address**  
support@connectone.com

**Mailbox**  
iChipDialUP

**Return email address**  
iChipDialUp@connectone.com

**Mailbox password**  
xxx

Optional

**DNS1 Server**  
212 . 123 . 81 . 116

**DNS2 Server**  
0 . 0 . 0 . 0

**iChip type :** iChip dialup

**Firmware ver :** IC603B24 (21.11.2001)

**Serial num :** 200102B3

**Boot block :** 0620

**Save** **Close**

Ready Serial port: COM1 Baud Rate: 38400

## 4.2 Full Configuration

The *Full Configuration* screen has a multi-tab screen with all the iChip parameters grouped according to functionality. The *iLAN Parameters* screen is available on iLAN or II-EVB-100, and includes *MAC address* (MACA) and *Assigned IP Address* (IPA) fields, which are info fields only.

The *Default IP Address* (DIP) can be configured automatically via DHCP or manually. Please review the “Quick Configure” section of this User Manual for more details. *Subnet Address* (SNET) and *IP Address Gateway* (IPG) functionality are also explained in the “Quick Configure” section.

The screenshot shows the 'iChip parameters' window with the 'LAN Parameters' tab selected. The window has a menu bar with 'File' and a 'ConnectOne™' logo. The tabs include: Email Format parameters, Server profiles, Operational parameters, Remote parameter update, HTTP, Serial net parameters, Remote Firmware update, and ISP connection. The LAN Parameters section contains the following fields and controls:

- MAC address (MACA):** A text field containing '000394060452'.
- Assigned IP address (IPA):** A text field containing '139.187.235.210'.
- Default IP address (DIP):** A section with a checked radio button for manual configuration and four input boxes containing '0', '0', '0', and '0'.
- Use DHCP:** An unchecked checkbox.
- Use IP Finder:** An unchecked checkbox.
- Sub Net address (SNET):** Four input boxes containing '255', '255', '0', and '0'.
- Gateway IP address:** Four input boxes containing '139', '187', '235', and '51'.

At the bottom of the window, there is a status bar with the following information:

- iChip type:** iChip plus
- Serial num.:** 00000008
- Firmware ver:** ID702D01 (13.11.2001)
- Boot block:** 0701
- Buttons:** Save, Apply, Close
- Status:** Ready
- Serial port:** COM1
- Baud Rate:** 115200

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### 4.3 Remote Firmware Update

iChip's firmware can be remotely updated by simply downloading an email with the new version attached to it. Email firmware updates can be done via regular email retrieval or via a dedicated mailbox. If a dedicated mailbox is used, then the mailbox settings below apply.

*Email Firmware Update Enable (UEN)* enables or disables email update functionality. If you wish to enable this feature mark the UEN checkbox. *Dedicated firmware update mailbox (UMBX)* is the mailbox user name. *Dedicated firmware update mailbox password (UMPW)* is the mailbox password and *Dedicated firmware update POP3 (UPOP)* is the POP3 server name. If a dedicated mailbox is not in use for email firmware update, then UMBX, UMPW and UPOP can be left empty.

The screenshot shows a configuration window titled "Remote Firmware update". The window has a tabbed interface with the following tabs: "Email Format parameters", "Server profiles", "Operational parameters", "Remote parameter update", "HTTP", "SerialNET parameters", "LAN Parameters", "Remote Firmware update" (which is the active tab), and "ISP connection".

Inside the "Remote Firmware update" tab, there is a checkbox labeled "Email firmware update enable (UEN)" which is checked. Below this, there are three text input fields:

- Dedicated firmware update mailbox (UMBX)**: The input field contains the text "User Mailbox".
- Dedicated firmware update mailbox password (UMPW)**: The input field contains the text "Mailbox password".
- Dedicated firmware update POP3 (UPOP)**: The input field contains the text "POP3 server name".



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## 4.4 ISP Connection Parameters

The *First* and *Second phone number* (ISP1 and ISP2) for dial-up ISP access can be entered with a comma for delay, area code, etc. *User name* (USRN) and *Password* (PWD) should be entered exactly as specified by the ISP. *Authentication method* (ATH) should be set according to the ISP capabilities. *Script*, *PAP* or *CHAP* can be chosen. In most cases, *CHAP* is the preferred authentication method.

The screenshot displays the 'ISP connection' tab within a web-based configuration utility. The interface features a top navigation bar with tabs for 'Email Format parameters', 'Server profiles', 'Operational parameters', 'Remote parameter update', 'HTTP', 'Serial net parameters', 'LAN Parameters', and 'Remote Firmware update'. The 'ISP connection' tab is currently selected and highlighted. The main content area contains several input fields and a dropdown menu:

- First phone number (ISP1):** A text input field containing '9.9603333'.
- Authentication method (ATH):** A dropdown menu with 'PAP' selected.
- Second phone number (ISP2):** An empty text input field.
- Max redial trials (RDL):** A text input field containing '5'.
- User name (USRN):** A text input field containing 'izaks'.
- Wait time before redialing (RTO):** A text input field containing '180'.
- Password (PWD):** A text input field containing masked characters 'XXXXXXXXXX'.

*Remote update password* (RPG) has several purposes. When not set, it will disable remote firmware update and will not allow Web parameters to be updated via a Web browser.

When set to '\*', iChip will not require a password from the remote user.

When set to any other password, iChip will require the remote user to submit the exact password as sorted on RPG.

---

LAN Parameters	Remote Firmware update	ISP connection
Email Format parameters	Server profiles	Operational parameters
<b>Remote parameter update</b>	HTTP	Serial net parameters

**Remote update password (RPG)**

---

## 4.5 Web Parameters Update (HTTP)

*URL to retrieve* (URL) is the URL address from which iChip will retrieve the HTTP page or item, like a picture within the page.

*Web Password* (WPWD) is for server purposes. When empty, *Web parameters update* is disabled. When set to '\*', no password will be used to authenticate parameters submit. When set to any other value, the password authentication procedure will take place.

The screenshot displays the 'Web Parameters Update (HTTP)' configuration window. The interface features a tabbed menu at the top with the following options: LAN Parameters, Remote Firmware update, ISP connection, Email Format parameters, Server profiles, Operational parameters, Remote parameter update, HTTP (selected), and Serial net parameters. The main content area contains two input fields: 'URL to retrieve (URL)' with the text 'aa' entered, and 'Web password (WPWD)' which is currently empty.

---

## 4.6 **SerialNET Parameters**

SerialNET is a mode whereby AT+i commands (except for a one-time setup) are NOT required to put iChip into serial-to-Internet mode.

*Enable connection to Web* (AWS) sets the iChip Web server to "Enabled" or "Disabled" mode, while in SerialNET mode.

*Character to enforce flush* (FCHR) is generates a TCP packet flush when received.

*Max characters before flush* (MCBF) sets the maximum characters buffered by iChip before a TCP packet is flushed.

*Max timeout to flush* (MTTF) sets the maximum time to wait before a TCP packet is flushed.

*Disconnection string* (DSTR) sets a string that will trigger iChip to complete the SerialNET session (it will also go offline on iModem or iChip Dial-Up).

*Inactivity time-out* (IATO) is the maximum time to wait from the last activity before completing the SerialNET session (iChip LAN) and disconnecting the line (iChip Dial-Up).

*Timeout before re-establishing connection* (SNRD) sets the number of seconds that iChip will wait before attempting to establish a socket connection.

*Port setting for SerialNET* (SNSI) sets the baud rate, number of data bits, parity and stop bit for iChip in SerialNET mode.

*Socket type* (STYP) sets the socket type to the destination to be TCP or UDP.

*Server SerialNET listening port* (LPRT) sets the listening port number for the SerialNET server.

*IP address to connect to* (HSRV) sets the port server name or IP address and port number to locate and establish a connection when serial data is transmitted from the device.

*IP address to send* (RRSV) sets the ring response server name or IP address and port number to locate and establish a connection after iChip has established a connection to the ISP in response to a RING detected on the modem. The IP address dynamically assigned to iChip by the ISP will be sent to the server in ASCII form, after which the socket will be closed.

*Email address to send IP (RRMA)* contains the name of the addressee that will receive an Email message after iChip establishes a connection to the ISP in response to a RING detected by the modem. The Email will contain the IP address, the ISP dynamically assigned to iChip, and its LPRT listen port.

**NOTE:** to enter SerialNET mode using the iChip Config utility, choose *SerialNET* → *Enter SerialNET Mode* from the main menu.

To exit SerialNET Mode and to enter iChip Mode, choose *SerialNET Mode* → *Exit SerialNET Mode* from the main menu.

The screenshot shows the 'SerialNET parameters' window in the iChip Config Utility. The window has a tabbed interface with the following tabs: LAN Parameters, Remote Firmware update, ISP connection, Email Format parameters, Server profiles, Operational parameters, Remote parameter update, HTTP, and SerialNET parameters (which is currently selected). The 'SerialNET parameters' tab contains the following settings:

- ☒ **Enable connection to web server (AWS)**
- Characters to enforce flush (FCHR)**: a
- Max characters before flush (MCBF)**: 0
- Max timeout to flush (MTTF)**: 0
- Disconnection string (DSTR)**: aaa
- Inactivity timeout (IATO)**: 0
- Timeout before reestablishing connection (SNRD)**: 0
- Port settings for serialNET (SNSI)**: 5,8,N,1,0
- Socket type (STYP)**: TCP (dropdown menu)
- Server serialNET port (LPRT)**: 0
- IP address to connect to (HSRV)**: 123.11.64.76 : 1
- IP address to send IP (RRSV)**: 123.11.64.79 : 2
- Email address to send IP (RRMA)**: iChip@connectone.com

---

## 4.7 **Email Format Parameters**

The following parameters enable flexibility when sending or retrieving emails as well as for configuring emails format and various properties.

*Transmit Email headers* (XFH) enables the host to receive the email body with or without the header.

*Limit number of headers* (HDL) sets the maximum number of header lines to retrieve.

*Filter String* (FLS) sets an ASCII string that qualifies an email message to be listed (via RML) or retrieved (via RMM) by iChip.

*Subject* (SBJ) sets the sent email subject field.

*Email address* (TOA) specifies the addressee email address.

*Address description* (TO) enables entering a logical name in the address description field.

*Return email address* (REA) sets the iChip email address selected for receiving emails.

*Sender description* (FRM) sets the iChip sender description field.

*Alternate addressee* (CC1-CC4) sets up to four CC (copy) fields for sent emails.

*Media type* (MT) sets the Media type (audio, video, application or text) used when generating an email with a MIME attachment.

*Media subtype* (MST) sets the media subtype (see Appendix in AT+i Programmer's Manual for examples) when generating an email with a MIME attachment.

*Attachment file name* (FN) sets the attachment file name when generating an email with a MIME attachment.

Remote parameter update		HTTP		Serial net parameters	
LAN Parameters		Remote Firmware update		ISP connection	
<b>Email Format parameters</b>		Server profiles		Operational parameters	
<input type="checkbox"/> <b>Transmit Email headers (XFH)</b> <b>Limit number of headers (HDL)</b> <input type="text" value="0"/> <b>Filter String (FLS)</b> <input type="text"/> <b>Subject (SBJ)</b> <input type="text" value="iChip Test Subjct"/> <b>Email address (TOA)</b> <input type="text" value="izaks@connectone.com"/> <b>Address description (TO)</b> <input type="text" value="Izak Shoshana"/> <b>Return Email address (REA)</b> <input type="text" value="iChip@connectone.com"/> <b>Sender description (FRM)</b> <input type="text" value="iChip Plus 015"/>		<b>Alternate addressee (CC1)</b> <input type="text" value="info@connectone.com"/> <b>Alternate addressee (CC2)</b> <input type="text"/> <b>Alternate addressee (CC3)</b> <input type="text"/> <b>Alternate addressee (CC4)</b> <input type="text"/> <b>Message body (BDY)</b> <input type="text"/> <b>Media type (MT)</b> <input type="text" value="Video"/> <b>Media subtype string (MST)</b> <input type="text"/> <b>Attachment file name (FN)</b> <input type="text"/>			

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## 4.8 Server Profiles

The following parameters are used to set the outgoing and incoming servers and mailbox settings:

*Leave copy on server* (LVS) enables or disables the deletion of retrieved emails from the mailbox.

*Primary domain name server* (DNS1 and DNS2) is used by iChip to transform a logical server name into an IP address. This field can be left empty when the exact server IP address is known or when using DHCP with extended result feature.

*Outgoing mail server* (SMTP) sets the outgoing SMTP mail server name. Both IP address and logical name can be used.

*Incoming mail server* (POP3) sets the incoming POP3 mail server name. Both IP address and logical name can be used.

*Mailbox user name* (MBX) and *Mailbox Password* (MPWD) are the mailbox username and password specified by your ISP.

The screenshot shows the 'Server profiles' configuration window. At the top, there are several tabs: 'Remote parameter update', 'HTTP', 'Serial net parameters', 'LAN Parameters', 'Remote Firmware update', 'ISP connection', 'Email Format parameters', 'Server profiles' (which is selected and highlighted with a dashed border), and 'Operational parameters'. Inside the 'Server profiles' tab, on the left, there is a checked checkbox for 'Leave copy on server'. Below it are two IP address input fields: 'Primary domain names server (DNS1)' with the value '139.187.235.51' and 'Secondary domain names server (DNS2)' with the value '0.0.0.0'. On the right side of the tab, there are four text input fields: 'Outgoing mail server (SMTP)' with 'mail.inter.net.il', 'Incoming mail server (POP3)' with 'mail.inter.net.il', 'Mailbox user name (MBX)' with 'izaks', and 'Mailbox password (MPWD)' with a masked password 'xxxxxxxx'.



## 4.9 Operational Parameters

*Extended return code (XRC)* is identical to ATXn and applicable only for modem operation or II-EVB-100 in iModem mode. To use the blind-dial feature in “On” mode, set the XRC to “0”. To set the blind dial feature to “Off”, set the XRC to “4”.

*Modem initialization string (MIS)* determines the Modem init string.

*Modem type designator (MTTP)* sets iChip to support specific modem types. Analog modems, SiLabs Si2400 ISModem, GSM and AMPS wireless modems are supported.

*Wait time to continue (WTC)* sets the modem S7 register to the required value.

*Baud rate (BDRM)* sets the iChip $\leftrightarrow$ Modem baud rate. Any baud rate from 2,400 to 115,200 bps can be set. An auto baud rate detection feature is also available.

*Fixed baud rate (BDRF)* sets the Host $\leftrightarrow$ iChip baud rate. Any baud rate from 2,400 to 115,200 bps can be set. An auto baud rate detection feature is also available.

*Flow control (FLW)* sets the Host $\leftrightarrow$ iChip and iChip $\leftrightarrow$ Modem flow control. Hardware flow control or iChip Wait/Continue flow control can be chosen.

The screenshot shows the 'Operational parameters' tab in the iChip Config Utility. The interface includes several tabs at the top: 'Remote parameter update', 'HTTP', 'Serial net parameters', 'LAN Parameters', 'Remote Firmware update', 'ISP connection', 'Email Format parameters', and 'Server profiles'. The 'Operational parameters' tab is active, displaying the following settings:

- Extended return code [XRC]**: A dropdown menu set to '0 - Blind dial' and a checked checkbox labeled 'Blind dial'.
- Modem initialization string [MIS]**: A text field containing 'AT&F0V1X4Q0&D2M1L3'.
- Modem type designator [MTYP]**: A dropdown menu set to 'Standard modem'.
- Wait time constant [WTC]**: A text field containing '45'.
- Baud rate (BDRM)**: A dropdown menu set to 'a - Auto baud rate'.
- Fix baud rate (BDRF)**: A dropdown menu set to 'a - Auto baud rate'.
- Flow control [FLW]**: A dropdown menu set to 'iChi to Host hardware flow control'.

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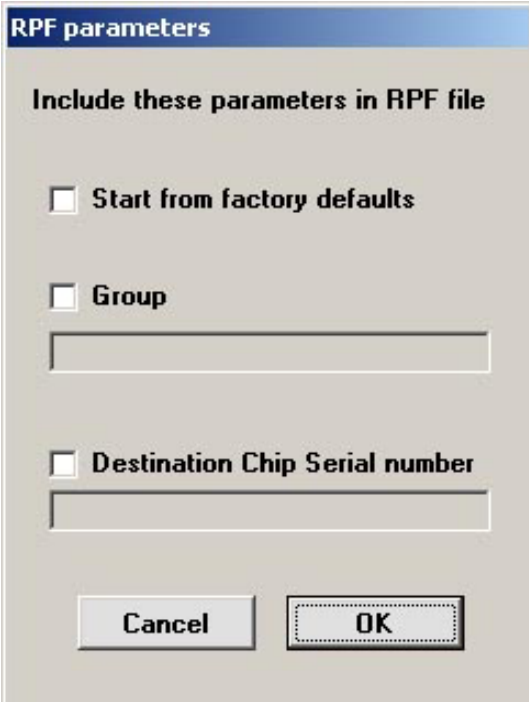
#### 4.10 Saving iChip Configuration to an RPF File

All or part of the parameters stored on iChip can be saved to a Remote Parameters File (RPF) or be loaded from an RPF file to iChip, with or without parameters configured on it.

To save the current iChip configuration into an RPF file, from the *Full Configuration* screen click on *File* → *Save as RPF File*. The following dialog appears:

To save new parameters starting from factory default settings, mark the *Start from factory default* checkbox.

To save your current configuration as is, except for parameters in the RPF file, leave the *Start from factory default* checkbox empty.

The image shows a dialog box titled "RPF parameters" with a blue header bar. Below the header, the text "Include these parameters in RPF file" is displayed. There are three checkboxes: "Start from factory defaults", "Group", and "Destination Chip Serial number". Each checkbox is currently unchecked. Below the "Group" checkbox is a text input field. Below the "Destination Chip Serial number" checkbox is another text input field. At the bottom of the dialog are two buttons: "Cancel" and "OK".

RPF parameters

Include these parameters in RPF file

☐ Start from factory defaults

☐ Group

☐ Destination Chip Serial number

Cancel OK

If you have the RPG parameter set in the iChip, you must check the *Group* checkbox and enter the RPG parameter value in the textbox.

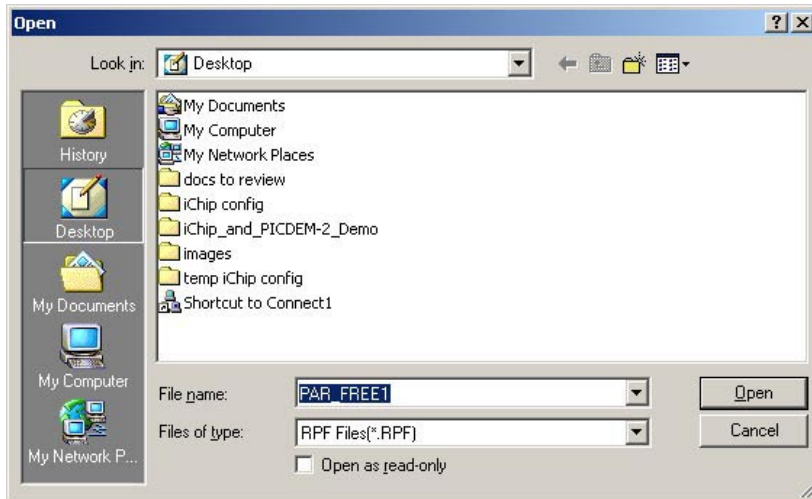
To load parameters file to a specific iChip located in a group, set the *Destination Chip Serial number* and enter the unique iChip serial number in the textbox.

**NOTE:** The unique iChip serial number can be obtained with the AT+iRP5 command or from the info section available on the bottom section of the iChip Config screens.

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## 5. Loading an RPF File

From the main menu, click on *File* → *Load RPF file*. The following screen will appear:



Browse to and select the desired file. All the parameters that appear on the RPF file will be loaded onto iChip. In case an illegal parameter value was assigned, the iChip Config utility will show the illegal parameter(s) and will offer to save the offending parameter(s) to a log.

Enter new valid parameter value(s) and load/save the RPF file again.

## 6. iChip Uploader

The *iChip Uploader* screen allows uploading iChip serially with Boot Block, Application, RPF file, and a Website, all without requiring AT+i commands or a hyper terminal.

From the main menu, click the *iChip Uploader* via the serial icon. The following screen appears:



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## 6.1 **Firmware Update**

To perform a Boot Block or Application firmware update, select the *Firmware* button. A *File Select* dialog appears. Browse to the desired IMF file and click *OK*. *Acknowledge* will load the file onto iChip.

To save time and to shorten the procedure, choose a higher baud rate before loading the Boot Block or application file onto iChip.

**NOTE:** Should a previous firmware upgrade be unsuccessful or if the procedure was not finished, the *Auto recover screen* will take over the firmware update procedure.

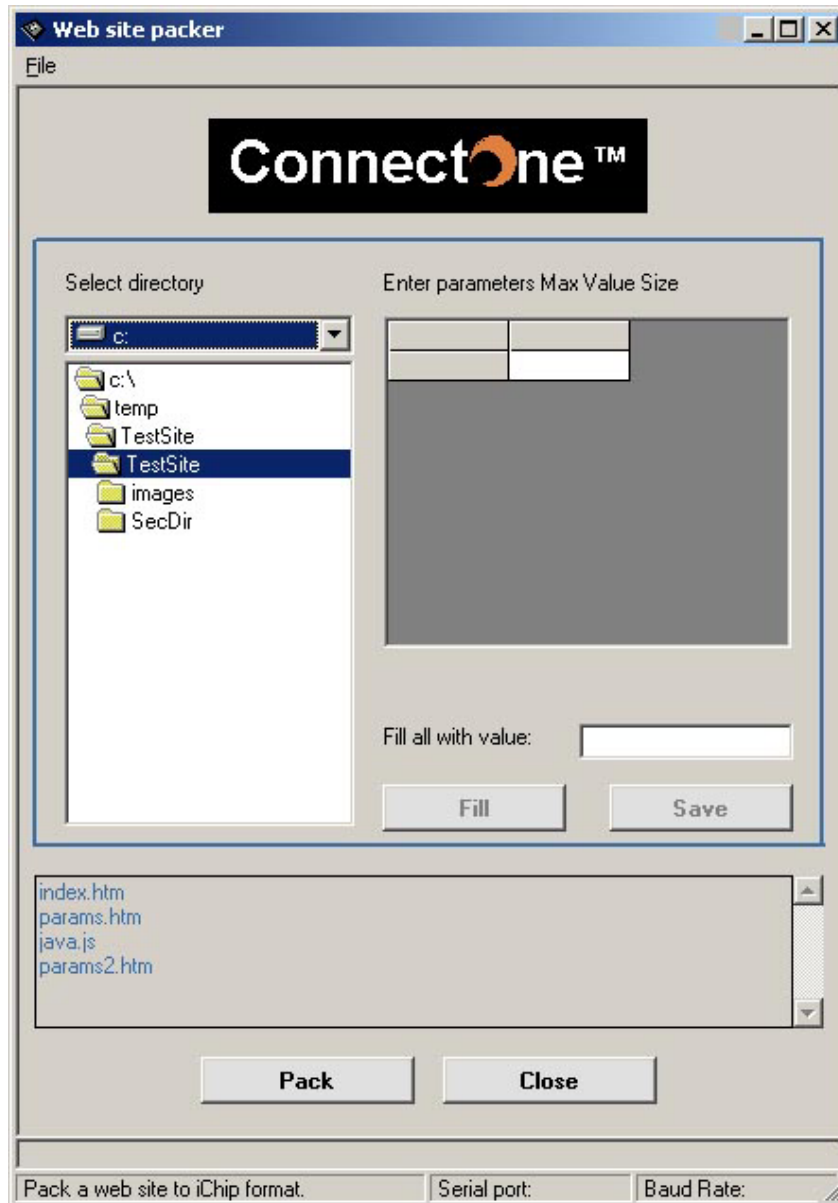
The same procedure applies for Parameters Update.

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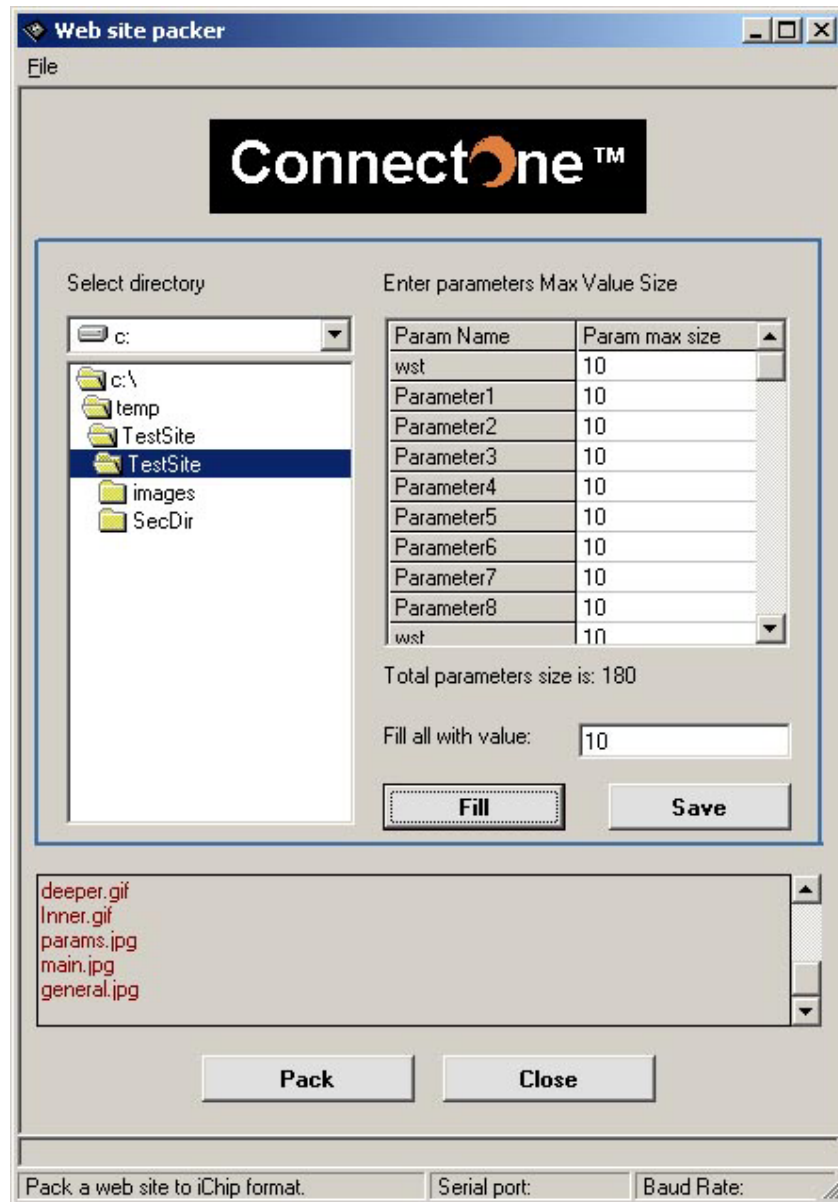
## 7. Website Packing

From version 7.0x and above, iChip supports Website serving and not just a single Web page serving, as was available in previous versions. It is necessary to pack the Website before loading it onto iChip.

To pack a Website and upload it serially, from the main menu click the *Site Pack* icon. The following dialog appears:



Using the navigation tree, locate the root directory of your Website and click *Pack*. The parameters of your Website will appear on the right side for size determination.



You can specify the size (in characters) for each parameter or use the *Fill* button to apply the same size to all parameters.

Once the size is assigned, click *Save*, chose the file name and location and click *Close*.

Web upgrade is not functional in this version.

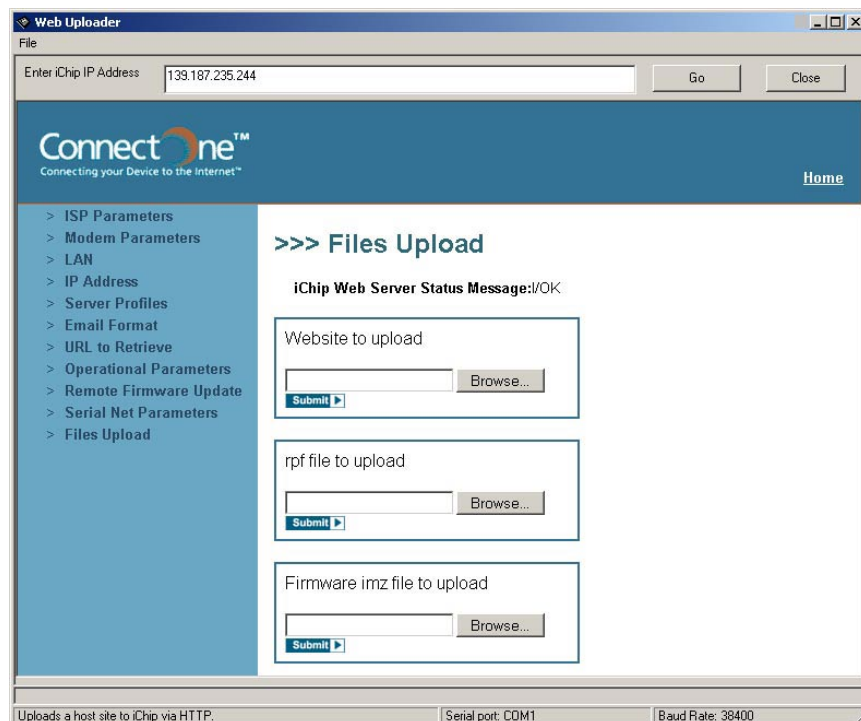
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## 8. HTTP Upload

### 8.1 Website Upload Via HTTP

To perform a Website upload, parameters upload or image file upload via the Web, please do the following:

- From the main screen, chose *Dumb Terminal* and type “AT+iwww”. iChip will respond with “I/(IP Address)”.
- From the main screen, click on the *iChip Site Uploader via HTTP* icon.
- Enter the IP address that iChip reports and click *Go*. The following screen appears:



**NOTE:** this site contains iChip’s internal Website. Typing in any Web browser the IP address assigned to iChip and the iChip path will lead to the internal Website. For example, “http://168.2.0.21/ichip” will show the iChip internal Website. Configuring and monitoring the Website are password governed. Please review the AT+iRPG parameter description for more details.

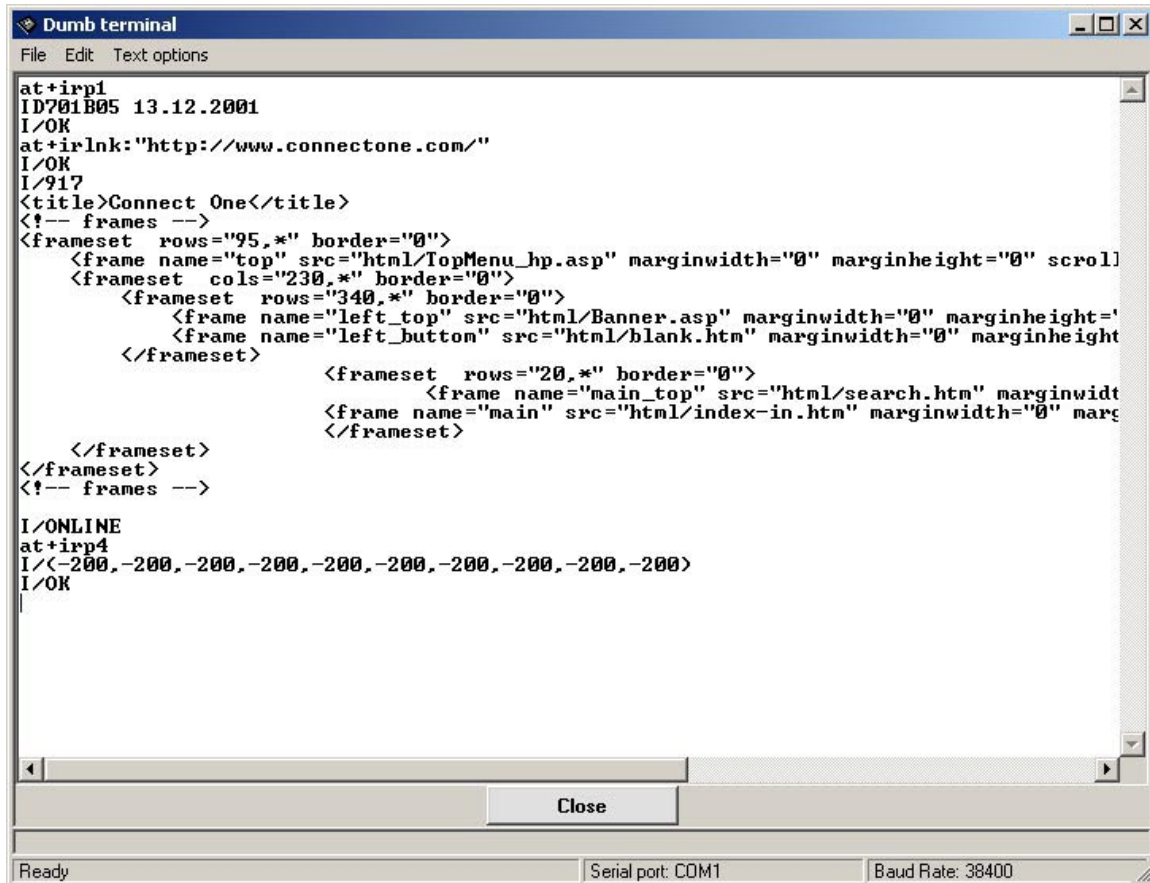
To load a Website onto the iChip, click the upper *Browse* button, choose the *Packed Web Site*, click *OK* and submit.

The same operation is used for parameters file upload and image file upload.



## 9. Dumb Terminal

A dumb terminal is included in the utility, allowing the user to enter AT or AT+ commands and to review the iChip or modem response. To enter the Dumb Terminal mode, click the *Dumb Terminal* icon on the main screen. The following screen appears:



To leave Dumb Terminal mode, click the *Close* button.

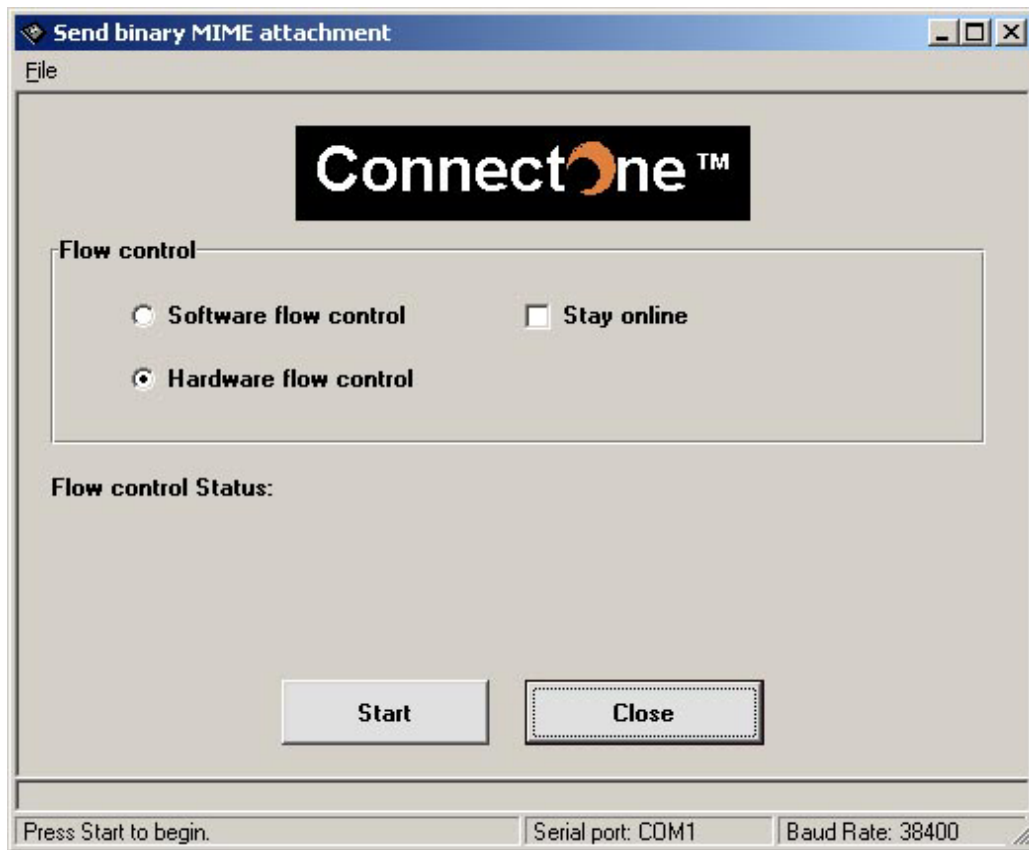
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## 10. Send Email with MIME Attachment

To send an email with or without a MIME attachment, general settings must be applied first. Make sure that ISP or LAN settings are correct and that the Mailbox username, password and Return email address are entered.

To send an email, the SMTP server must be specified. Check the Full Configuration, Email, and ISP settings tabs for more details.

Once the send email attachment icon is pressed, the following screen appears:

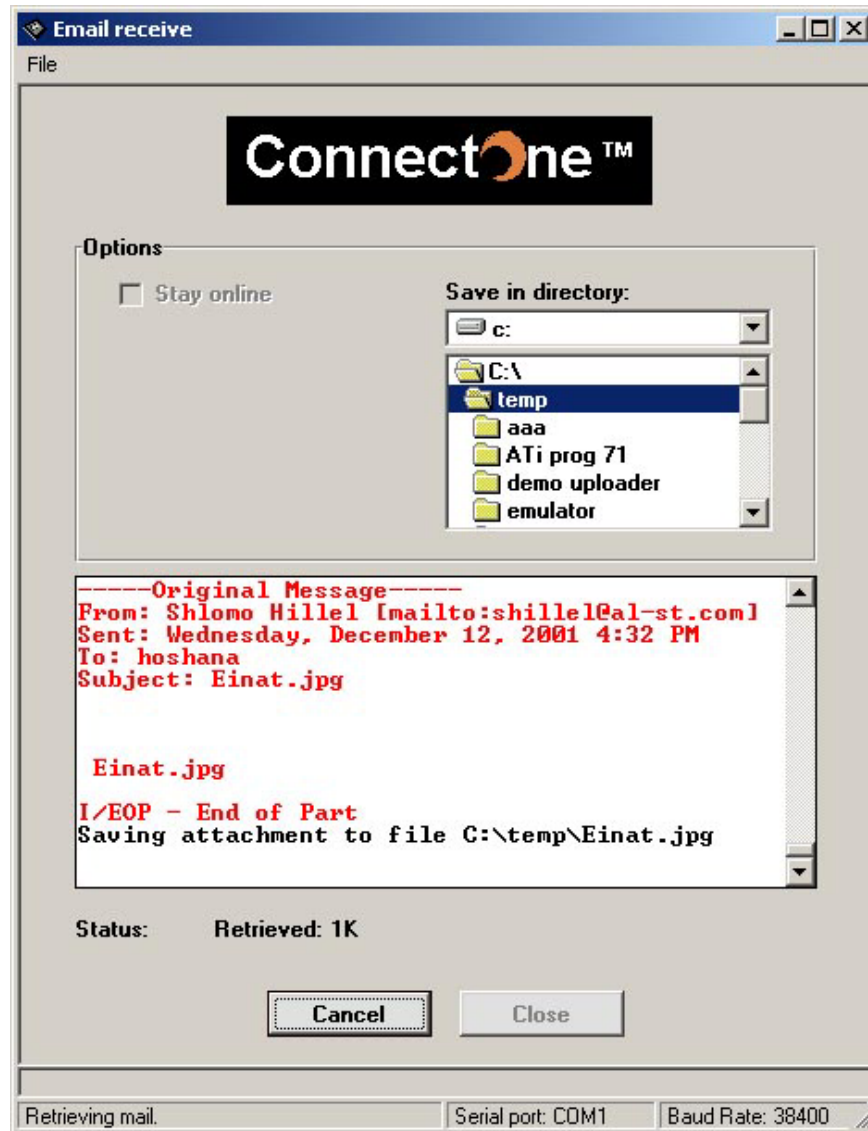


Choose hardware or software flow control. For iChip Dial-up and iChip Plus in dial-up mode, specify whether you wish to stay on line after the email was sent.

To choose the MIME attachment to be sent, click on *Start* and choose the file. The iChip will show a status message on the “Flow control Status” line.

## 11. Receiving Emails

The iChip Config utility enables retrieving and saving emails using the iChip. To start receiving emails, from the main screen click the *Receive email* icon. The following page appears:



During download, email content will be displayed on the message window and attachments will be saved to the chosen directory.

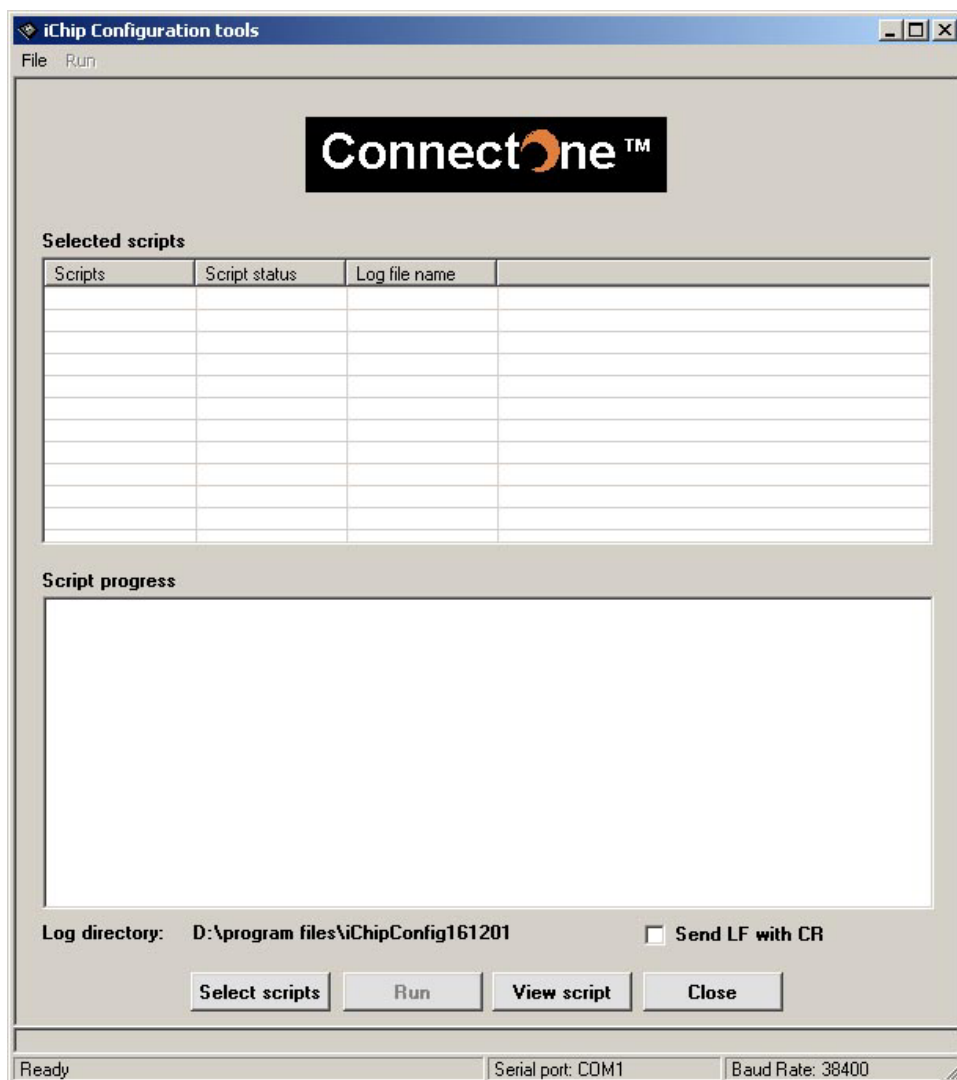
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## 12. Script Tool

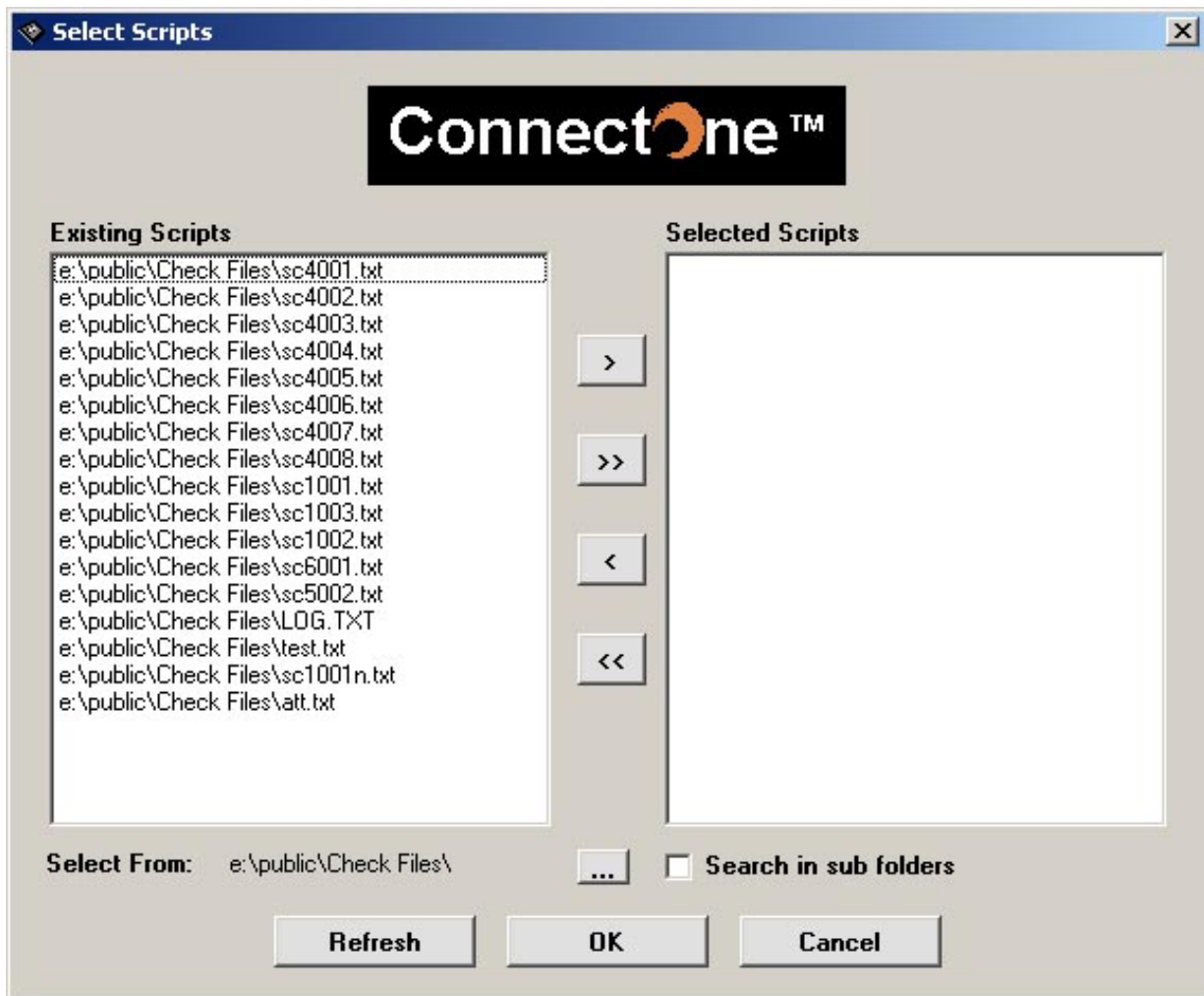
The Script Tool enables the execution of tasks that are time-sensitive (like timeout when working with sockets) and can enable running AT+i commands in sequence for automatic tests or for tasks that require long run time.

Scripts can be linked and will be executed by the scripted tool according to order of appearance. Full log files of all activity are saved, status message describes the current script status, and scripts can be viewed and edited from within the script tool.

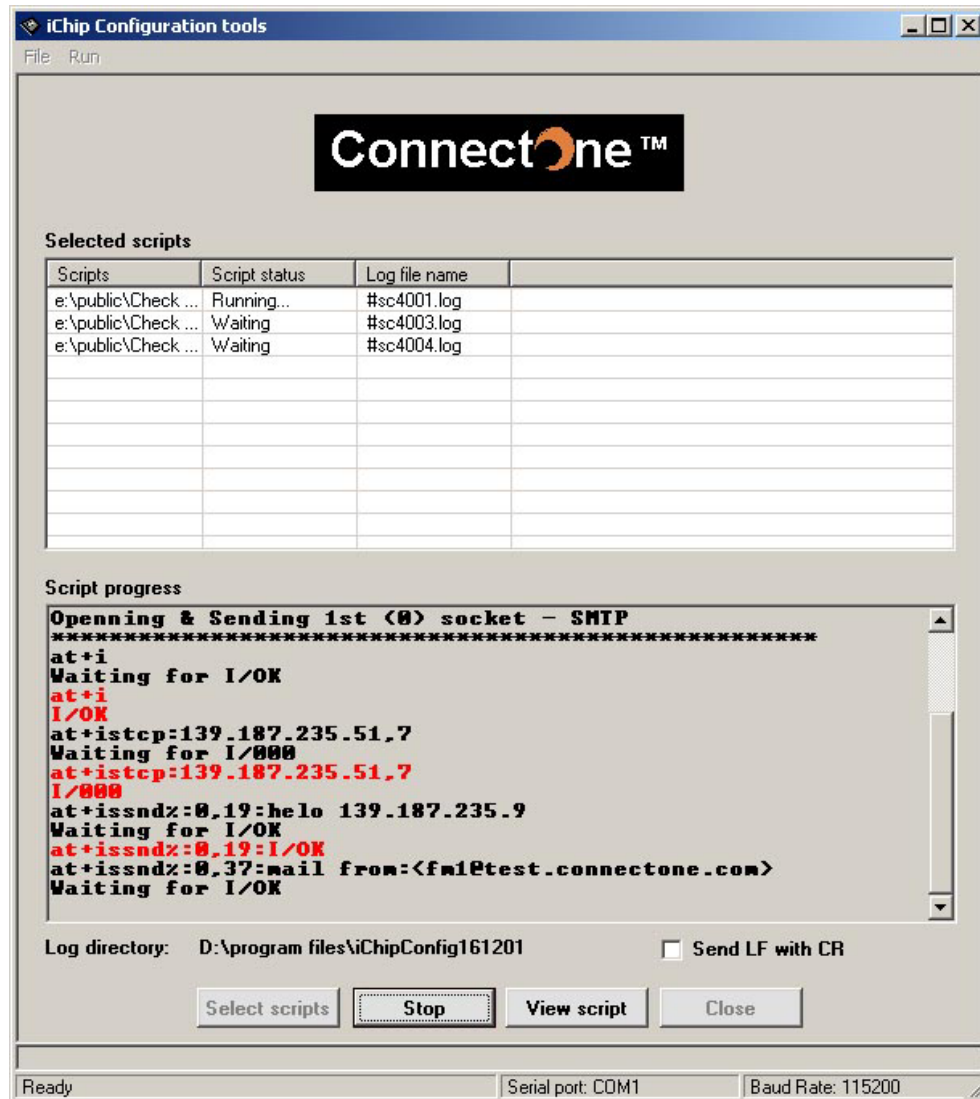
To start the Script Tool, click the *Script Tool* icon from the main screen. The following screen appears:



Select the script or scripts to be executed using the *Select Scripts* button and click *OK*. You have the option to search in sub folders using the *Search sub folder* checkbox and refresh the available scripts list using the *Refresh* button.



Once the scripts are chosen, click *Run* to execute the chosen script or scripts.



The Script Tool will stop on “I/Error”, when the script(s) are over, or when the *Stop* button was pressed.

The *View Script* button will open the script in Notepad and will enable script viewing and editing.

Although it is recommended to terminate every command to the iChip with “CR”, the Script Tool supports a mode of operation where both LF and CR are used to terminate every AT or AT+i command.

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### 13. Changing iChip Plus Communication Platform

This option is only applicable for iChip Plus. Once the *Change iChip Plus Communication Platform* icon was pressed the following screen appears:



The iChip Config utility recognizes the current chosen communication platform and offers a radio button to change to a different one.

Simply chose the new communication platform and click *OK*.

---

## 14. Get URL

iChip Config supports the retrieval of Web pages or items within a Web page. From the main screen, click the *Get URL* icon. The following screen appears:



Type the URL to be retrieved and add a slash (‘/’) at the end of the URL if not entered fully (for example, <http://www.connectone.com/>), or enter a full path without the slash (for example, <http://www.connectone.com/index.htm>).

With iModem or iChip Plus in dial-up mode, you can choose to stay online by checking the *Stay online* option.

Checking the *Show in browser* checkbox will cause the iChip Config utility to open the retrieved Web page in the default browser.

Retrieved Web pages are saved into the specified path under the *Save as* textbox and under the filename specified by the user.

Once a Web page or item is retrieved, the utility will show a success or fail message.